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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/757,269	01/08/2001	David K. Umberger	10003127-1	6246

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HEWLETT-PACKARD COMPANY
Intellectual Property Administration
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EXAMINER

BANANKHAH, MAJID A

ART UNIT PAPER NUMBER

2127

DATE MAILED: 01/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/757,269	Applicant(s) UMBERGER ET AL.	
	Examiner Majid A Banankhah	Art Unit 2127	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 September 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-5 and 7-20 is/are rejected.
- 7) ☐ Claim(s) 2 and 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to Amendment filed September 01, 2004. Claims 1-20 are considered for examination.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Saito (U.S. Pat. No. 6,578,064, hereafter Saito).

Per claims 1, Saito teaches: a method for optimizing an efficiency of a data processing system (the system of Saito, distributed computing system, col. 3, line 38-40) the method comprising the steps of:

identifying a plurality of operations awaiting execution on at least one service component of said data processing system (load of the computer consisting of programs, col.4, lines 10-17);

assigning an initial priority ranking to each of said plurality of operations prior to run time (corresponding priority level of processing, col. 4, line 10-17); and

dynamically, modifying said assigned initial priority rankings at run time to optimize efficiency of said data processing system (priority level changing means for changing the priority level of a program which executes the processing in accordance with a priority level indicated by the priority level conversion means, col. 4, lines 14-17).

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Per claim 2, the claim is rejected for the reasons stated in the rejection of claim 1, and further determining a service demand placed upon each of the service components arising from performance of said plurality of operations (selecting a computer for executing, col. 4, lines 61-64);

estimating a utilization rate for each of the service components based on said determined service demands, wherein said dynamically modifying includes adjusting said assigned initial priority rankings at to substantially equalize said utilization rates of the service components (prediction means for predicting a processing time, col. 5, lines 10-19, and).

Per claims 3-4, the system of teaches of teaches of internal and external operation to the service components, and selecting one operation for execution from plurality of operations based on utilization in col. 4, lines 61 to col. 5, lines 14. Further he teaches of directing one service component to execute operation external to the service component, and based on utilization rate being below-predetermined threshold (col. 4, line 65 to col. 5, line9).

Per claim 5, Saito teaches of adjusting priority ranking of the external operation in col. 6, lines 41-67.

3. Following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 9-13, and 15-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Saito as applied to claim 1-8 above, and further in view of Parks (U.S., Pat. No. 6,598,174, hereafter Parks).

Claim 9 is rejected for the reasons stated in the rejection of claim 1-8, however, Saito fails to teach of storage device having storage level, and a communication with the storage device.

However, the reference of parks teaches of a storage device such as RAID, and levels associated with (col. 2, lines 24-47). He also teaches of assigning priority to levels of storage devices (col. 3, lines 15-27, and). The reference of Parks fails to reference assigning priority at run time during data processing system. It would have been obvious for one ordinary skill in the art at the time the invention was made to use the dynamic priority assignment of Saito in the environment of priority storage system of Parks in order to increase efficiency and optimize performance.

Per claims 10-11, the reference of Park teaches of the limitation in col. 4, lines 9-26.

Per claim 12, Saito teaches of utilization rate in col. 4, lines 59-65.

Per claim 13, Saito teaches of performance demand and initial priority ranking in col. 4, lines 10-17.

Per claim 15, the system of Saito guarantees a minimum a minimum level of service (col. 5, lines 10-14).

Per claim 16, regarding the data transferring data block between the RAID and data migration between levels of RAID, see Park col. 2, line 24-47 and col. 4 line 57 to col. 5, line 6.

Per claim 17, the reference of Park teaches of transfer work request in col. 6, lines 36-60.

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Per claim 18, Park teaches of RAID storage device and transfer work request in col. 2, lines 24-47, and col. 6, lines 36-60.

Per claims 19-20, the reference of Saito teaches of modifying priority in 4, lines 51-45.

Per claim 20, the reference of Saito teaches of equalizing priority in col. 4, lines 61-65.

4. Claims 6-8, and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Majid A. Banankhah** whose telephone number is (571) 272-3770. The examiner can normally be reached on Monday – Thursday, 8:00 AM – 4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756.

Information regarding the status of an application may be obtained from the patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll free).

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-9600.

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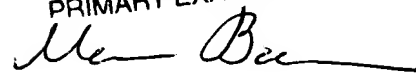
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Maid Banankhah

1/21/05

MAJID BANANKHAH
PRIMARY EXAMINER

A handwritten signature in cursive script, appearing to read "Maid Ban", written in black ink.